AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method of determining the depletion of Al and Cr of a γ/γ' MCrAlY-coating applied to a component after ~~the~~ use in a high temperature environment, the γ/γ' MCrAlY-coating ~~applied to a component~~ exhibiting a non-equilibrium γ/γ'-microstructure at a temperature lower than the temperature during operation, the method comprising ~~the steps of~~:

(a) applying a defined annealing heat treatment to the γ/γ' MCrAlY-coated component to transform the non-equilibrium high temperature γ/γ'-microstructure into the equilibrium room temperature microstructure with a α-Cr phase,

(b) measuring qualitative impedance curves or the coating electrical conductivity and magnetic permeability of the MCrAlY-coating by means of a multi-frequency eddy current system, and

(c) determining the Al and/or Cr depletion of the coating from the measured qualitative impedance curves or coating conductivity and permeability.

2. (Original) The method according to claim 1, wherein from the Al and/or Cr depletion of the coating the remaining life-time of the coating is determined.

3. (Currently Amended) The method according to claim 1, wherein the ~~method is applied for a~~ coating ~~consisting~~ consists of (wt.-%) 25% Cr, 5.5% Al, 1% Ta, 2.6% Si, 0.5%Y, ~~Rest~~ rest Ni and unavoidable impurities.

4. (Currently Amended) The method according to claim 1, wherein a transformation heat treatment at a temperature of 800° - 870° C for 16 to 24 ~~h~~ hours is applied.

5. (Currently Amended) The method according to claim 1, wherein after the operation the coating is heat treated with a temperature above 1000°C for at least 2 hours with a subsequent controlled cooling rate of ~~2-10K/min~~ 2-10 K/min from the heat treatment temperature down to below 800°C to transform the microstructure.

6. (New) The method according to claim 2, wherein the coating consists of (wt.-%) 25% Cr, 5.5% Al, 1% Ta, 2.6% Si, 0.5%Y, rest Ni and unavoidable impurities.

7. (New) The method according to claim 2, wherein a transformation heat treatment at a temperature of 800° - 870° C for 16 to 24 hours is applied.

8. (New) The method according to claim 3, wherein a transformation heat treatment at a temperature of 800° - 870° C for 16 to 24 hours is applied.

9. (New) The method according to claim 2, wherein after the operation the coating is heat treated with a temperature above 1000°C for at least 2 hours with a subsequent controlled cooling rate of 2-10 K/min from the heat treatment temperature down to below 800°C to transform the microstructure.

10. (New) The method according to claim 3, wherein after the operation the coating is heat treated with a temperature above 1000°C for at least 2 hours with a subsequent controlled cooling rate of 2-10 K/min from the heat treatment temperature down to below 800°C to transform the microstructure.

11. (New) The method according to claim 4, wherein after the operation the coating is heat treated with a temperature above 1000°C for at least 2 hours with a subsequent controlled cooling rate of 2-10 K/min from the heat treatment temperature down to below 800°C to transform the microstructure.

12. (New) The method according to claim 1, wherein the qualitative impedance curves of the coating are measured.

13. (New) The method according to claim 1, wherein the electrical conductivity and magnetic permeability of the coating are measured.